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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 09/293,163      | 04/16/1999  | E. MICHAEL KERR      | 5593                | 4521             |

7590 11/20/2001

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EXAMINER

REDDICK, MARIE L

ART UNIT PAPER NUMBER

1713

DATE MAILED: 11/20/2001

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                               |                            |  |
|------------------------------|-------------------------------|----------------------------|--|
| <b>Office Action Summary</b> | Applicati n No.<br>09/293,163 | Applicant(s)<br>KERR ET AL |  |
|                              | Examiner<br>Judy M. Reddick   | Art Unit<br>1713           |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 10 October 2001.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2 and 4-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                             | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other:  |

**C ntinued Prosecution Appli ati n**

**The request filed on 10/10/01 for a Continued Prosecution Application (CPA) under 37 CFR 1.53(d) based on parent Application No. 09/293,163 is acceptable and a CPA has been established. An action on the CPA follows.**

**The following is a quotation of the second paragraph of 35 U.S.C. 112:**

**The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.**

**Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

**A) The recited "amu ranging from about 2,000 to 100,000" per claim 1 constitutes indefinite subject matter as per it not being readily ascertainable as to the exact entity the "amu" is based on, i.e., "weight average" or "number average", the two being substantially different. Further, it is not readily ascertainable if the "about" is intended to qualify the firstly recited value only or the entire range.**

**B) The recited "acrylamidomethyl sulfonate" per claims 2 and 4 is not art-recognized.**

**C) The recited "molecular weight ranging from about 2,000 to about 20,000" per claim 5 constitutes indefinite subject matter as per it not being readily ascertainable as to the exact entity that the "molecular weight" is based on, i.e., weight averag " or " number average", the tw being substantially different.**

*D) The recited "wherein the polymer comprises acrylamid , arylic acid and acrylamidomethyl sulfonate" per claim 4 constitutes indefinite subject matter as per it not being known by any rules of chemistry as to how the antecedently recited polymer can comprise the antecedently recited monomers VS monomer units. See also claim 6.*

**Claim Rejections - 35 USC § 103**

*The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:*

*(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.*

*Claims 1, 2 and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horsley et al in combination with Brown et al.*

*Horsley et al disclose and exemplify methods for facilitating the flow of a material in the form of fines which include silica-based fines and coal fines wherein, said method involves, basically, forming a slurry of silica-based or coal fines in water and adding to said slurry 0.01 to 0.05 wt. % of an (in)organic dispersant which includes a naphthalene sulphonate aminoplast polymer. See, e.g., the Abstract, cols. 1-8 and the Runs of Horsley et al.*

*The disclosure of Horsley et al differs basically from the claimed invention as per the non-express guidelines to use the specific*

***sulphonate-containing polymer, as claimed, as the dispersant in the system of Horsley et al. However, Brown et al use sulphonate-containing polymers governed by a molecular weight of 1,000 to 20,000, as claimed, as dispersants in producing viscosity stable slurries of particulate minerals such as calcium carbonate. See, e.g., the Abstract and cols. 2-3 of Brown et al. Brown et al further emphasizes at col. 4, lines 12-16 that the sulphonate-containing polymer dispersants of the invention can be used to effectively and stably disperse other mineral particulates in addition to calcium carbonate. Therefore, it would have been prima facie obvious to the skilled artisan, following the guidelines of Brown et al, to use the sulphonate-containing polymer dispersant of Brown et al in addition to or in lieu of the dispersant in the system of Horsley et al and with a reasonable expectation of success. Criticality for such clearly commensurate in scope with the claims, not having been demonstrated on this record.***

***Response to Arguments***

***Applicant's arguments filed 10/10/01 have been fully considered but they are not persuasive.***

***Relative to the 112 issue—It is urged and maintained that “number average” and “weight average” molecular weights are substantially different. Changing the “average molecular weight” to “amu”(atomic mass units) does not diffuse this issue since the two are the same.***

***Relative to Horsley et al in combination with Brown et al—It is urged and maintained that the instantly claimed invention is obvious within the meaning of 35 USC 103 over Horsley et al as per reasons clearly set forth in the Grounds of Rejection supra.***

***The crux of Counsel's arguments appear to hinge on there being no motivation to substitute a material as taught in Brown et al for a structurally different material taught in Horsley et al to arrive at the presently claimed invention. With all due respect to Counsel's opinion, Horsley clearly states that the disclosed invention is directed to an improved means of controlling the viscosity of slurries of mineral particles via the use of a specific sulphonated-containing polymer dispersant(column 1, lines 1-67 and column 2, lines 64-68). Brown et al also discloses the use of a sulphonated-containing polymer dispersant for engendering viscosity stability of slurries of mineral particles(column 2, lines 50-6). To this end, for reasons already stated in the grounds of rejection supra and the aforementioned rationale, it would have been obvious to the skilled artisan to use the dispersant of Brown et al in the system of Horsley et al and with a reasonable expectation of success. There is absolutely nothing viable on this record diffusing this issue. Mere attorney's arguments unsupported by factual evidence are given little weight. Consult In re Lindner(173 USPQ 356).***

#### **Conclusion**

***Any inquiry concerning this communication or earlier communications from the examiner should be directed to Judy M. Reddick whose telephone***

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**number is (703) 308-4346. The examiner can normally be reached on Monday-Friday, 6:30 A.M.-3:00 P.M..**

**If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wu David can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3599 for regular communications and (703) 305-3599 for After Final communications.**

**Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-2381.**

**JMR Jmrh  
November 13, 2001**

*J. M. Reddick  
Judy M. Reddick  
Primary Examiner  
ART UNIT 1713*